

Photoresist dispensing device

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Application number: TW20000102680 20000217
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Abstract of TW459073B

A photoresist dispensing device for use in applying a metered amount of photoresist on a wafer comprises, a photoresist storage tank, a nozzle for spraying the photoresist on the wafer, a feeder unit for drawing a metered amount of the photoresist out of the storage tank and discharging it through the nozzle, a pneumatic control unit for controlling the operation of the feeder unit with the use of pressurized air; and a filter disposed in between the storage tank and the feeder unit for removing alien matters present the photoresist. The feeder unit includes a base having an inlet port leading to the storage tank, an outlet port leading to the nozzle and first through third intermediate passageways interconnecting the inlet and outlet ports, a first cutoff valve mounted on the base at a position between the inlet port and the first intermediate passageway, a diaphragm pump attached to the base at a position between the first and second intermediate passageways, a second cutoff valve secured to the base at a position between the second and third intermediate passageways, and a suck-back valve affixed to the base at a position between the third intermediate passageway and the outlet port.

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Photoresist dispenser for semiconductor manufacture, has pneumatically controlled discharge unit by which photoresist is supplied from tank to nozzle

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Number of Countries: 004 Number of Patents: 005

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|---------------|------|----------|---------------|------|----------|----------|
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| KR 2000056254 | A | 20000915 | KR 995403 | A | 19990218 | 200122 |
| US 6332924 | B1 | 20011225 | US 2000506813 | A | 20000218 | 200206 |
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Patent Details:

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|---------------|------|--------|--------------|-------------------------------------|
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Abstract (Basic): JP 2000243698 A

NOVELTY - A base (42) of discharge unit (24) is connected between inflow and discharge routes (44,46). Interruption valve (54) connected in base is connected between inflow rate and connection route (48). A pump (56) is connected between connection routes (48,50). Interruption valve (58) is connected between connection routes (52,54). A back valve (60) is connected between connection route (52) and discharge route.

DETAILED DESCRIPTION - The inflow route is connected to a storage tank in which photoresist is stored. The resist is discharged on a wafer by a nozzle connected to the discharge route. The operation of discharge unit is controlled by a pneumatic controller (100). A filter (34) is arranged between the tank and discharge unit to filter the photoresist.

USE - For applying photoresist film in manufacture of semiconductor device.

ADVANTAGE - Facilitates injection of photoresist of desired quantity on wafer at constant pressure. Simplifies repair and exchange of discharge unit by simplifying structure of discharge unit.

DESCRIPTION OF DRAWING(S) - The figure shows the explanatory drawing of photoresist dispensing apparatus.

Discharge unit (24)

Filter (34)

Base (42)

Inflow route (44)

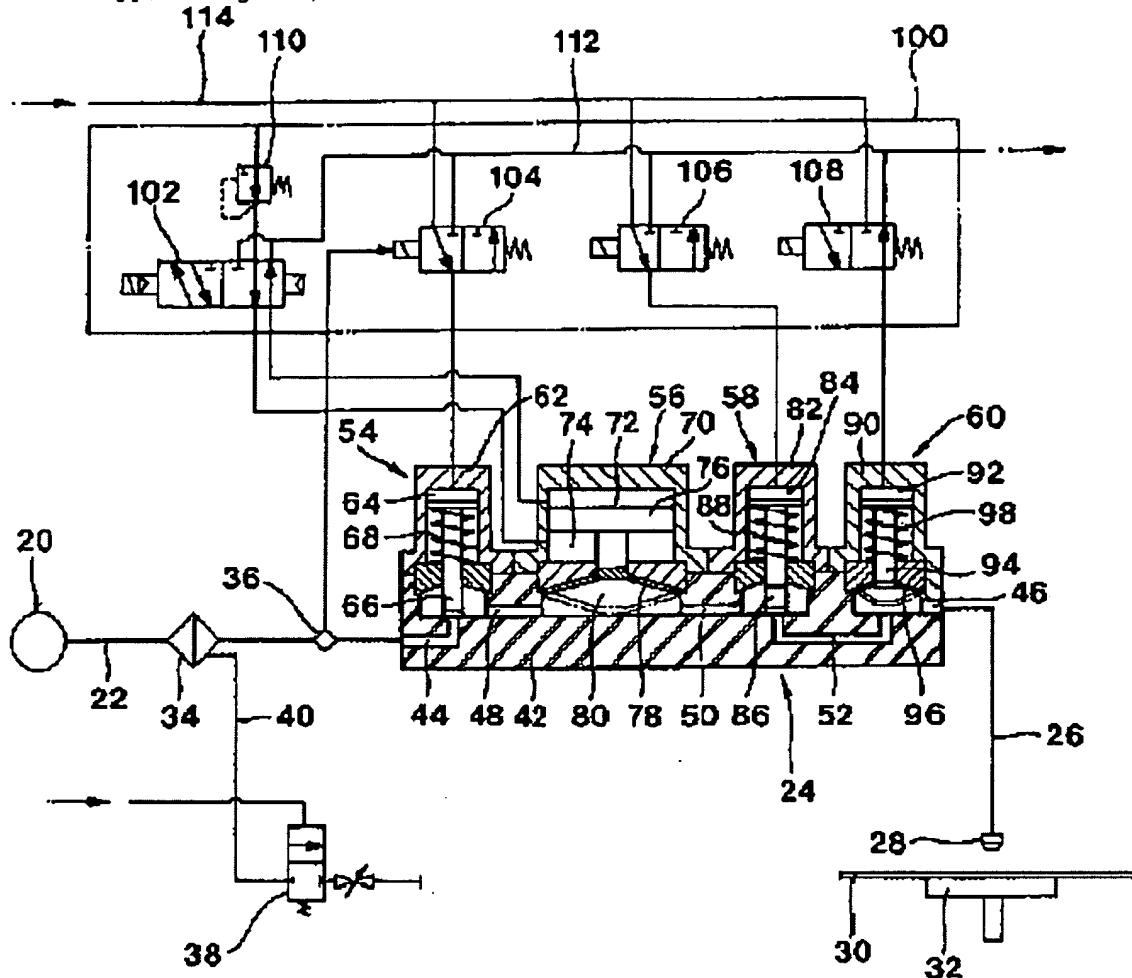
Discharge route (46)

Connection routes (48,50,52,54)

Interruption valves (54,58)

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Pump (56)
 Back valve (60)
 Pneumatic controller (100)
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Title Terms: PHOTORESIST; DISPENSE; SEMICONDUCTOR; MANUFACTURE; PNEUMATIC; CONTROL; DISCHARGE; UNIT; PHOTORESIST; SUPPLY; TANK; NOZZLE

Derwent Class: G06; L03; P42; P84; U11; X25

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